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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/887,420	06/22/2001	Kevin E. Spaulding	83000THC	8947

7590 02/07/2005
Thomas H. Close
Patent Legal Staff
Eastman Kodak Company
343 State Street
Rochester, NY 14650-2201

EXAMINER

BRINICH, STEPHEN M

ART UNIT PAPER NUMBER

2624

DATE MAILED: 02/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/887,420	SPAULDING ET AL.	
	Examiner	Art Unit	
	Stephen M Brinich	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-13, 15-21 and 23-26 is/are allowed.
- 6) ☒ Claim(s) 14 and 22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/11/04</u> . | 6) <input type="checkbox"/> Other: ____ |

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DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 14 & 22 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 14 & 22 each recite a computer program product, but do not recite a process, machine, manufacture, or composition of matter. Examiner respectfully suggests a recitation along the lines of "a computer-readable medium containing a program..." to supply a statutory element.

Allowable Subject Matter

3. Claims 1-13, 15-21, & 23-26 are allowed.
4. The following is a statement of reasons for the indication of allowable subject matter:

Re claims 1, 15-16, & 23-26 (and dependent claims 2-13 & 17-21) the art of record does not teach or suggest the recited arrangement of halftoning two color channels representing low-density and high-density versions of substantially the same color in which one matrix is the inverse (i.e. obtained by subtracting values in the original matrix from a predetermined maximum) of the other.

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In particular, Examiner recognizes that Spaulding and Kakutani contain similar teachings, but not a teaching or suggestion of this recited arrangement, for the following reasons:

Spaulding et al discloses (Abstract) a set of dither matrices for halftoning a multi-channel two-dimensional array digital color image in which the matrices are designed to minimize a visual cost function.

However, Spaulding et al discloses the use of such matrix sets for dissimilar colors (cyan, magenta, and yellow) rather than for the recited similar colors (substantially the same color, differing in density) of the present claims.

Kakutani discloses (Abstract; column 1, line 35 - column 2, line 2) dithering using light and deep (i.e. dark) dots of the same basic color and (column 24, lines 27-31) a set of dither matrices for halftoning a multi-channel two-dimensional array digital color image in which one matrix is the inverse of the other (obtained by subtracting values in the first matrix from a predetermined maximum).

However, Kakutani discloses the use of such matrix pairs for dissimilar colors (cyan and magenta), which does not teach or suggest the use of such matrix pairs for the recited similar

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colors (substantially the same color, differing in density) of the present claims.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yamada et al and Matsumoto et al disclose examples of halftone dither matrix printing using low-density and high-density versions of the same ink color.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. Brinich at 703-305-4390. The examiner can normally be reached on weekdays 7:00-4:30, alternate Fridays off.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Tech Center 2600 Customer Service center at 703-306-0377.

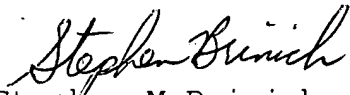
If attempts to contact the examiner and the Customer Service Center are unsuccessful, supervisor David Moore can be contacted at 703-308-7452.

Faxes pertaining to this application should be directed to the Tech Center 2600 official fax number, which is 703-872-9306.

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Hand-carried or courier-delivered correspondence pertaining to this application should be directed to

US Patent and Trademark Office
220 South 20th Street
Crystal Plaza Two, Lobby, Room 1B03
Arlington VA 22202


Stephen M Brinich
Examiner
Art Unit 2624

smb

February 4, 2005